

SUBJECT TEACHING GUIDE

G410 - Graphic Representation Techniques

Degree in Electrical Engineering

Academic year 2022-2023

1. IDENTIFYING DATA					
Degree	Degree in Electrical Engineering			Type and Year	Core. Year 1
Faculty	School of Industrial Engineering and Telecommunications				
Discipline	Subject Area: Graphical Expression Basic Training Module				
Course unit title and code	G410 - Graphic Representation Techniques				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA GEOGRAFICA Y TECNICAS DE EXPRESION GRAFICA				
Name of lecturer	JOSE ENRIQUE CERON HOYOS				
E-mail	jose.ceron@unican.es				
Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 2. DESPACHO (S2005)				
Other lecturers	MARIA ESTHER VALLEJO LOBETE RAQUEL ARMESTO ALONSO JOAQUIN DIEZ GUTIERREZ				

3.1 LEARNING OUTCOMES

- Interpretation and implementation of standardized technical drawing.
- Use of CAD Systems for:
 - 1.Solving geometric problems.
 - 2.3D representation and visualization of parts and elements.
 - 3.Make and interpret technical drawings for engineering projects.

4. OBJECTIVES

Represent parts and elements in a graphical document, using descriptive geometry, graphical projection and technical drawing standards.

Expose by a graphical, oral and written way ideas of design and interpretation of engineering drawings.

6. COURSE ORGANIZATION

CONTENTS

1	Metric and descriptive geometry. Isometric and Cavalier projection.
2	Metric and descriptive geometry. Projections of curves, surfaces and solids.
3	Technical and engineering drawings. CAD Systems.
4	Metric and descriptive geometry. Orthographic Projection. Topographic representation.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Three partial tests (22,5%-22,5%-45%).	Written exam	No	Yes	90,00
Classroom works and projects.	Work	No	Yes	10,00
TOTAL				100,00
Observations				
Students who do not pass the continuous assessment (average of 6 in the partial tests), may make the final test, similar to the three subtests, which is completed with the qualification of class work and presentation (10%), and tests partial (30%).				
Observations for part-time students				
Part-time students have same evaluation criteria that full-time students.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

OCW

<http://ocw.unican.es/enseanzas-tecnicas/tecnicas-de-representacion-grafica-g420>

Sist. de representación:

GEOMETRÍA DESCRIPTIVA. F. Izquierdo Asensi

GEOMETRÍA DESCRIPTIVA. (Tomo 1 - 2) F.J. Rodríguez de Abajo.

EJERCICIOS DE ... J.I.Alvaro

EXPRESIÓN GRÁFICA Y DAO. EJERCICIOS. F. Fadón

Dibujo técnico:

Dibujo Técnico. Ediciones BACHMANN – FORBERG

NORMALIZACIÓN DEL DIBUJO INDUSTRIAL. R. Villar del Fresno, R. García, J.L. Caro.

MANUAL DE NORMAS UNE SOBRE DIBUJO. Ed. AENOR

DIBUJO TÉCNICO. R. de Abajo y Alvarez. Ed. Donostiarra

Manual of Engineering Drawing. Colin H Simmons. Dennis E Maguire. Elsevier 2004

D.A.O.

GRÁFICAS POR COMPUTADORA. Hearn y Baker.

<http://personales.unican.es/saizl>